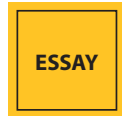# Curbing the Spread of Misinformation

Insights, Innovations, and Interpretations from the Misinformation Solutions Forum

Brian G. Southwell and Vanessa Boudewyns, Editors

**RTI** INTERNATIONAL

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# CHIME: The Campaign for Health Information Empowerment

ESSAY

The concept of political misinformation is familiar to Americans, following the 2016 presidential election. But misleading health information is often more pervasive and more pernicious than fake political news. This is due to financial pressures from the medical industry, the scarcity of good science and medical journalism, the pursuit of clicks by Internet publishers, and a relatively low level of health literacy among the general public (Aspen Ideas Festival, 2017; Schattner, 2017). Nearly 80 percent of American internet users have sought health information online (Fox & Duggan, 2013), and patient-generated social media discussion forums are increasingly used as online venues for the exchange of health-related information and advice. However, while the web gives citizens access to a vast array of medical information sources, it also challenges consumers to identify valuable information from misinformation that may be presented to them by internet page-ranking algorithms, including misleading information disguised as legitimate news (Brossard & Scheufele, 2013; Tennant et al., 2015). We propose to launch a research-driven grassroots movement that will fortify citizens against the appeals of health misinformation. We call our project "CHIME: The Campaign for Health Information Empowerment."

This project has three phases: In Phase I, we conduct experiments designed to reveal the appeals of misleading health information. Specifically, we are conducting online experiments with a 2 (news message: fake vs. real news) × 2 (health issues: cancer treatment vs. mosquito control) between-subjects design. We include open-ended questions and rating scales to check whether participants are able to identify characteristics of false information such as emotionally driven style, reliance on false information and conspiracy theories, lack of transparency, and spoofing discussed in the prior literature. A main effect of news messages (fake vs. real news) on attitudes and behavioral intentions will demonstrate the impact of fake health news. Perceived issue controversy, knowledge, and prior attitudes (measured independent variables) may moderate the effects of news messages, which will provide a nuanced understanding of misleading health news and effects.

In Phase I, we ask participants to respond to both real and fake stories, and we will compare the responses of journalists and journalism educators, whose training should make them more familiar with the practices of good journalism, to the general public. By doing so, we build upon scholarly work in media literacy and critical thinking that may be part of the solution of the misinformation problem.

In addition to media literacy, we postulate that there are predispositions that make people more likely to be influenced by misinformation and conspiracy theories, such as public trust, risk, threshold of uncertainty, ideological bias, and motivated reasoning. In Phase II, we will develop a variety of inoculation

messages that help address these psychological processes and remind people to engage in critical thinking about media sources and content, with the goal of determining the best strategies to help inoculate citizens against misleading health information.

In Phase III, we will work with networks of patient-centered nongovernmental organizations and patient communities on social media to validate and disseminate our findings in real-world settings. We will work with our partner organization, Living Beyond Breast Cancer (LBBC), to crystalize the best practices in the battle against fake health news. LBBC has a four-star rating from Charity Navigator and provides programs that reach more than 500,000 people every year. LBBC's mission is to connect people to trusted information and a community of support We will share our results in semi-structured interviews with administrators of patient-centered social media groups and brainstorm ways to implement our findings with these groups. Students at Florida International University will research and develop a formal campaign to disseminate our findings. Our goal is to launch a grassroots movement to empower citizens to become more aware of the misinformation problem and become more resistant to the effects of such information.

## References

Aspen Ideas Festival. (2017, June). *Fake health news metastasizes* [Audio file]. Aspen Ideas Festival Spotlight Health. Retrieved from https://soundcloud.com/aspenideas/fake-health-news-metastasizes

Brossard, D., & Scheufele, D. A. (2013). Science, new media, and the public. *Science, 339*(6115), 40–41. https://doi.org/10.1126/science.1232329

Fox, S., & Duggan, M. (2013) The diagnosis difference: Part two: Sources of health information. Retrieved from http://www.pewinternet.org/2013/11/26/part-two-sources-of-health-information/

Schattner, E. (2017). Can cancer truths be told? Challenges for medical journalism. In: Dizon, D. S., & Pennel, N. (Eds.), *2017 ASCO Educational Book*. Alexandria, VA: ASCO.

Tennant, B., Stellefson, M., Dodd, V., Chaney, B., Chaney, D., Paige, S., & Alber, J. (2015). eHealth literacy and Web 2.0 health information seeking behaviors among baby boomers and older adults. *Journal of Medical Internet Research, 17*(3), e70. https://doi.org/10.2196/jmir.3992

# RESPONSE TO "CHIME: THE CAMPAIGN FOR HEALTH INFORMATION EMPOWERMENT"

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The campaign proposed by Drs. Susan Jacobson and Weirui Wang offers a way to address health misinformation in the areas of breast cancer and beyond. Although the technique employed by this project, inoculation, is not novel in misinformation research (e.g., Cook, Lewandowsky, & Ecker, 2017), this campaign has great potential to demonstrate that (a) inoculation is an effective solution to misinformation epidemics in health news, (b) social media can be a useful tool for conveying inoculation messages, and (c) collaboration with non-profit organizations can be an effective way for health campaigns' success with suggestions made during the Misinformation Solutions Forum.

Given that it is difficult to correct misinformation once it is processed (Lewandowsky, Ecker, Seifert, Schwarz, & Cook, 2012), it may be more effective to neutralize potential misinformation through a technique called inoculation (McGuire & Papageorgis, 1961) or "prebunking." Extant literature explores inoculation through some health contexts, such as anti-smoking campaigns. The current project will use this technique in the novel context of breast cancer. If inoculation is also found to be effective in this context, where individuals experience a high level of fear and anxiety, this technique can be applied to other severe health-related contexts.

Another novel approach implemented in the proposed project is the use of social media to deliver the inoculation messages. Social media are a tool for providing breast cancer patients with education and support (Attai et al., 2015). However, little research has been done to examine the effect of inoculation messages disseminated on social media. The present project plans to deliver the inoculation messages via social media to members of various breast cancer support groups on Facebook. This process will be a good test of whether social media can be a viable platform for conveying inoculation messages, in contrast to traditional education settings, such as classrooms (e.g., Kowalski & Taylor, 2009).

The campaign could be launched with a partner organization, Living Beyond Breast Cancer. Partnering with an established organization gives the project numerous advantages, including involvement with the observed community. Should the project demonstrate success, the researchers plan to expand campaign strategies with other illness-related organizations.

At present, the team may find the following suggestions useful to maximize their intended outcomes. First, they intend to create a taxonomy of false information characteristics but turning to extant literature will provide them with the information needed to create various inoculation strategies. Critically, the strategies must be sufficiently pretested before launching the campaign. Second, the project must also elaborate on their plan to evaluate the campaign's

successes, as careful evaluation of the campaign is vital to expand this campaign within and beyond breast cancer. Third, the researchers should consider how the messages may elicit various responses across individuals. For example, the effectiveness of the campaign may differ depending on the participants' stage of cancer or treatment. Finally, although social media are a source of information for many cancer patients, traditional media still play an important role in providing health information. Researchers should collaborate with journalists to further expand the scope of this campaign.

## References

Attai, D. J., Cowher, M. S., Al-Hamadani, M., Schoger, J. M., Staley, A. C., & Landercasper, J. (2015). Twitter social media is an effective tool for breast cancer patient education and support: Patient-reported outcomes by survey. *Journal of Medical Internet Research, 17*(7), e188. https://doi.org/10.2196/jmir.4721

Cook, J., Lewandowsky, S., & Ecker, U. K. (2017). Neutralizing misinformation through inoculation: Exposing misleading argumentation techniques reduces their influence. *PLoS One, 12*(5), e0175799. https://doi.org/10.1371/journal.pone.0175799

Kowalski, P., & Taylor, A. K. (2009). The effect of refuting misconceptions in the introductory psychology class. *Teaching of Psychology, 36*(3), 153–159. https://doi.org/10.1080/00986280902959986

Lewandowsky, S., Ecker, U. K., Seifert, C. M., Schwarz, N., & Cook, J. (2012). Misinformation and its correction continued influence and successful debiasing. *Psychological Science in the Public Interest, 13*(3), 106–131. https://doi.org/10.1177/1529100612451018

McGuire, W. J., & Papageorgis, D. (1961). The relative efficacy of various types of prior belief-defense in producing immunity against persuasion. *Journal of Abnormal and Social Psychology, 62*(2), 327–337. https://doi.org/10.1037/h0042026